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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,364	07/29/2003	Shigeru Nakamura	500.38285VX1	5993

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/628,364	Applicant(s) NAKAMURA ET AL.	
	Examiner Aristotelis M Psitos	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/517,594.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/27/03</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicants' response of 10/31/03 has been considered with the following results.

Information Disclosure Statement

The IDS filed with the application has been made of record. The foreign documents have not, since no copies of them have been provided.

Claim Objections

Applicant is advised that should claims 13-19 be found allowable, claims 20-33 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

As far as the examiner can ascertain, claims 20-33 are duplicate of the subject matter claimed in claims 13-19.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 13,17,18, 19, 20, 24-27,31-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6,298,028 in view of JP 09-128794.

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Claim 1 recites an optical head; such is also recited in claim 2/1 of the patent.

A plurality of semiconductor lasers also claimed in claim 3/2/1

Collimating lens, such is claimed in claim 2/1

Focuser focus lens in claim 2

.....

Plurality of optical detectors see claim 1

Claim 13 also recites a dividing means. This element is depicted in the above patent, as element 7 in figure 7; however, it is not claimed.

Nevertheless, the examiner concludes that JP 09-128794 teaches such an element for its inherent use.

It would have been obvious to modify the base system of 6,298,028 with the above teaching from the JP document, especially because the overall system disclosed in the patent requires such to operate.

With respect to claim 17, the light-gathering point are "substantially" coincided with one another.

With respect to claim 18, the emerging light is "substantially" perpendicular to a normal line-detecting surface of the optical detectors.

With respect to claim 19, the lasers are chips.

Similar analysis is made for claims 20,24-26 and for claims 27,31-33. In particular although claim 27 recites as its preamble an electronic system comprising: at least one user input output port and a recording/reproducing apparatus including an optical head, this phraseology is considered an obvious variant of the above noted combination of references, i.e., the optical head in the primary reference is used in a recording/reproducing apparatus which inherently includes the optical head as recites as well as at least one user input or output port – normally the incoming signal is applied to a well known input port, and or the output of the optical head is provided to a well known output port. Hence the examiner concludes that claim 27 is met by the above combined references.

2. Claims 14,21 and 28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2/1 of U.S. Patent No. 6,298,028 in view of JP 09-128794. As discussed in the above document, a diffraction grating is used. Since no further modification is necessary to combine the references, no additional motivation is required.

3. Claims 15,22 and 29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2/1 of U.S. Patent No. 6,298,028 in view of JP 09-128794.

These claims recite a mathematical relationship to describe the separation between the laser emitting points. As far as the examiner can interpret the machine assisted translation of the above noted JP document, such a relationship if not inherently present is obvious over the document – see the machine assisted translation starting at paragraph –39 and continuing till the description of table 2. The examiner interprets such mathematical relationship as described in those passages.

It would have been obvious to modify the base system of the US patent 6,298,028 with the above noted passages of the JP document, motivation is as discussed therein to optimize the overall system/hence reduce the overall footprint thereof.

4. Claims 16,23 and 230 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2/1 of U.S. Patent No. 6,298,028 in view of JP 09-128794 as relied upon in paragraph 2, with the additional teaching from Komma et al.

The ability of having the dividing means, separated into 4 quadrants is taught by the Komma et al system.

It would have been obvious to modify the base system as relied upon above in paragraph 1, with the additional teaching from Komma et al, motivation is to provide for signal separation and hence proper detection upon the appropriate detecting elements.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 13,17-20,24-27 and 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchizaki et al.

Uchizaki et al discloses in this environment an optical head used for an optical recording/reproducing apparatus having a plurality of semiconductor lasers (see figure 2 and its description) wherein at col. 8 lines 60+ two emitting wavelengths are disclosed. In reference to the acknowledged prior art depicted in fig. 27 therein, the examiner interprets the two lasers as present. The collimating lens is lens 14, the objective lens is the focusing lens, and element 35 is meets the plurality of optical detectors.

With respect to claim 17, the light-gathering point of the wavelengths are (sic – is) substantially coincided with one another.

With respect to claim 18, the light emerging direction of the semiconductor lasers is substantially perpendicular to a normal line-detecting surface of the optical detectors.

With respect to claim 19, the laser source is referred to as a chip.

Similar analysis is made with respect to independent claims 20 and 27 and dependent claims 24-26 and 31-33. With respect to claim 27, since the overall description of the Uchizaki et al reference is that of a recording and reproducing environment, the user input/output ports as well as the recording/reproducing apparatus is met by the above reference.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 14,15,21,22,28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 13,20 and 27 as stated in paragraph 5 above, and further in view of JP 09-128794.

The JP document discloses the use of a diffraction grating as a dividing element. Furthermore, see the description commencing at paragraph 39 of the machine assisted translation which focuses upon the relationship between the lasers emitting points (reference to as S and S' in the machine assisted translation) as well as their separation (x direction) and the association of pitch and wavelength thereto.

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It would have been obvious to modify the base system of Uchizaki et al and modify such with the above teaching from the JP document. Motivation is to use existing relationships so as to optimize the optical system/ hence reduce overall footprint thereof. Selection between one type of diffraction element (hologram) vs. a diffraction grating is one of semantics, i.e., the examiner equates the two.

17. Claims 16,23 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 14,21 and 28 above, and further in view of Komma et al.

The ability of having the dividing means, separated into 4 quadrants is taught by the Komma et al system.

It would have been obvious to modify the base system as relied upon above in paragraph 1, with the additional teaching from Komma et al, motivation is to provide for signal separation and hence proper detection upon the appropriate detecting elements.

Conclusion

Applicants' have designated this application as a divisional, however, as noted in the communication of 7/29/03 this application is "a continuation of 09/517594". As far as the examiner can decipher the present claims, the identification of this application as a divisional cannot be supported by the pending claims. Further explanation as to why applicants considers such to be a proper designation is respectfully requested.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abe et al – laser chips, Ono et al – quadrant dividing element 75 (diffraction grating).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653



AMP